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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/735,323	12/12/2003	Keith Alan Moriarty	92.1048	2266
7590	07/26/2005		EXAMINER	
Tim W. Curington Stonehouse Technology Centre Brunel Way, Stroudwater Business Park Stonehouse, GL 10 3SX UNITED KINGDOM			GAY, JENNIFER HAWKINS	
			ART UNIT	PAPER NUMBER
			3672	
DATE MAILED: 07/26/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/735,323	MORIARTY ET AL.
	Examiner	Art Unit
	Jennifer H. Gay	3672

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 12 December 2003 is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| <ol style="list-style-type: none"> 1)<input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2)<input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3)<input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>12/12/03</u>. | <ol style="list-style-type: none"> 4)<input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____. 5)<input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6)<input type="checkbox"/> Other: _____. |
|---|--|

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 12 December 2003 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Drawings

2. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 215. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

3. The abstract of the disclosure is objected to because the abstract has been constructed as a single run-on sentence instead of a narrative paragraph. Correction is required. See MPEP § 608.01(b).

4. Applicant is reminded of the proper language and format for an abstract of the disclosure. The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed

150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

6. Claims 1, 2, 4, 7, 14, 15, and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Hahn et al. (US 6,419,033).

Regarding claim 1: Hahn et al. discloses a directional casing drilling system. The system includes the following features:

- A casing string 112.
- A mud motor 149 operatively coupled to the casing string.
- A rotary steerable system 145 operatively coupled to the mud motor.
- A drill bit 131 operatively coupled to the rotary steerable system.

Regarding claim 2: The system further includes a underreamer 132 disposed below the casing string and above the drill bit and being operatively coupled to the casing string.

Regarding claim 4: The rotary steerable system is a push-the-bit system.

Regarding claim 7: The system further includes a casing latch 152.

Regarding claim 14: Hahn et al. further discloses a method for using the above system. The method involves rotating the casing string at a first speed, rotating the drill bit at a second speed via the motor (3:54, 55; due to the length of the casing string and the friction imparted thereon, the casing would inherently rotate and a slower speed than the drill bit that is rotated by the mud motor), changing the direction of the bit by operating the rotary steerable system (4:48-50).

Regarding claim 15: The method further involves enlarging a pilot hole 141 drilled by the drill bit using the underreamer.

Regarding claims 17-20: The method further involves measuring the drill bit azimuth and inclination, positioning the casing to point in the desired azimuthal direction, and using the mud motor to rotate the drill bit to drill a straight path (4:40-5:22).

7. Claims 1-3, 5-9, 11-16, and 18 are rejected under 35 U.S.C. 102(e) as being anticipated by Chen et al. (US 6,877,570).

Regarding claim 1: Chen et al. discloses a directional casing drilling system. The system includes the following features:

- A casing string 12.
- A mud motor 14 operatively coupled to the casing string.
- A rotary steerable system 26 operatively coupled to the mud motor.
- A drill bit 18 operatively coupled to the rotary steerable system.

Regarding claims 2, 9: The system further includes a underreamer 16 disposed below the casing string and above the drill bit and being operatively coupled to the casing string.

Regarding claims 3, 16: The system further includes a casing shoe cutter at a bottom end of the casing string (5:58-61).

Regarding claim 5: The rotary steerable system is a point-the-bit system.

Regarding claims 6, 11, 12: The system further includes a measurement while drilling collar 44 disposed above the mud motor and operatively coupled to the casing string.

Regarding claim 7: The system further includes a casing latch 152.

Regarding claim 8: Chen et al. discloses a directional casing drilling system. The system includes the following features:

- A casing string 12 having an integral bend (3:10-12) proximate a lower end of the string.
- A mud motor 14 operatively coupled to the casing string.
- A drill bit 18 operatively coupled to the rotary steerable system.

Regarding claim 13: The system further includes an offset centralizer 52 disposed inside the casing string at a lower end thereof.

Regarding claim 14: Chen et al. further discloses a method for using the above system. The method involves rotating the casing string at a first speed, rotating the drill bit at a second speed via the motor (3:8-22), changing the direction of the bit by operating the rotary steerable system.

Regarding claim 15: The method further involves enlarging a pilot hole drilled by the drill bit using the underreamer (3:33-42).

Regarding claim 18: Chen et al. discloses a method for directional casing drilling using the above system. The method involves positioning the casing string so that the bend points in a desired azimuthal direction and engaging the mud motor to rotate the drill bit (3:8-22).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hahn et al. in view of Parant (US 4,842,081).

Hahn et al. discloses all of the limitations of the above claims except for the mud motor being disposed within the casing.

Parant discloses a method and system for drilling with casing. Parant further teaches placing a mud motor **22** used to rotate the bit within the casing **1**.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the system and method of Hahn et al. such that the mud motor was located within the casing as taught by Parant in order to have protected the motor from contact with the wellbore wall.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al. in view of Parant.

Chen et al. discloses all of the limitations of the above claims except for the mud motor being disposed within the casing.

Parant discloses a method and system for drilling with casing. Parant further teaches placing a mud motor **22** used to rotate the bit within the casing **1**.

It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the system and method of Chen et al. such that the mud motor was located within the casing as taught by Parant in order to have protected the motor from contact with the wellbore wall.

Double Patenting

11. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

12. Claims 1-4, 6, 7, and 14 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-13 of copending Application No. 10/735,312 in view of Hahn et al. Application No. 10/735,312 discloses all of the features of the above claims except for the use of a mud motor. Hahn et al. discloses a system similar to that of the instant application and 10/735,312. Hahn et al. further teaches the use of a mud motor to rotate the drill bit. It would have been considered obvious to one of ordinary skill in the art, at the time the invention was made, to have modified the system and method of Application No. 10/735,312 to include a mud motor in order to have provided a means for rotating the drill bit that enabled more power to be provided to the motor without the need for surface equipment.

This is a provisional obviousness-type double patenting rejection.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The remaining references made of record disclose various wellbore drilling systems.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer H. Gay whose telephone number is (571) 272-7029. The examiner can normally be reached on Monday-Thursday, 6:30-4:00 and Friday, 6:30-1:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bagnell can be reached on (571) 272-6999. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 3672

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jennifer H. Gay
Patent Examiner
Art Unit 3672

JHG
July 21, 2005